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3712-63
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23 November 1963

MEMORANDUM FOR THE RECORD

**SUBJECT: Comparative Elapsed Time Between Major Milestones;
A-12, B-58, B-70 Aircraft Development Programs**

1. Leading toward the A-12, twenty-six months of preliminary design studies involving various aircraft configurations were expended prior to contractual "go-ahead". Fifty months, since "go-ahead," have been expended on the A-12 to date. Of these, twenty-nine months were required from "go-ahead" to first aircraft completion (rollout), thirty-one months to first flight, thirty-seven months to first Mach 2 flight, and forty-six months to first Mach 3 flight.
2. Leading toward the B-58, thirty-two months of design studies of various configurations were expended prior to contractual "go-ahead." Eighty-eight months, since "go-ahead," were expended on the B-58 prior to operational capability. Of these, fifty months were required from "go-ahead" to rollout, fifty-one months to first flight, and fifty-nine months to first Mach 2 flight.
3. Leading toward the B-70, thirty-eight months of design studies of various configurations were expended prior to contractual "go-ahead." Seventy-one months, since "go-ahead," have been expended on the B-70 to date. Various technical problems including fuel tank sealants have delayed first aircraft rollout approximately twelve months. Rollout is expected early next year.
4. The above information is contained in the Attachment 1 bar chart, which shows the comparative elapsed times in months between milestones but using the same scale for the three programs for the periods before and after their respective contractual "go-ahead" dates. Attachment 2 tabulates these milestones for each program in chronological order showing calendar dates and serves as the basis for the Attachment 1 bar chart comparison.

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Aircraft Systems Division
(Special Activities)

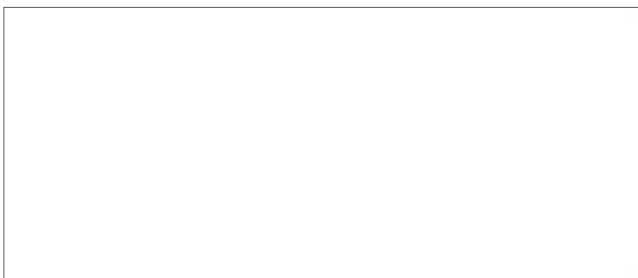
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Attachments: 1 and 2

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COMPARATIVE DESIGN MILESTONES PRIOR TO CONTRACTUAL GO-AHEAD

COMPARATIVE MILESTONES ACHIEVED SUBSEQUENT TO CONTRACTUAL GO-AHEAD

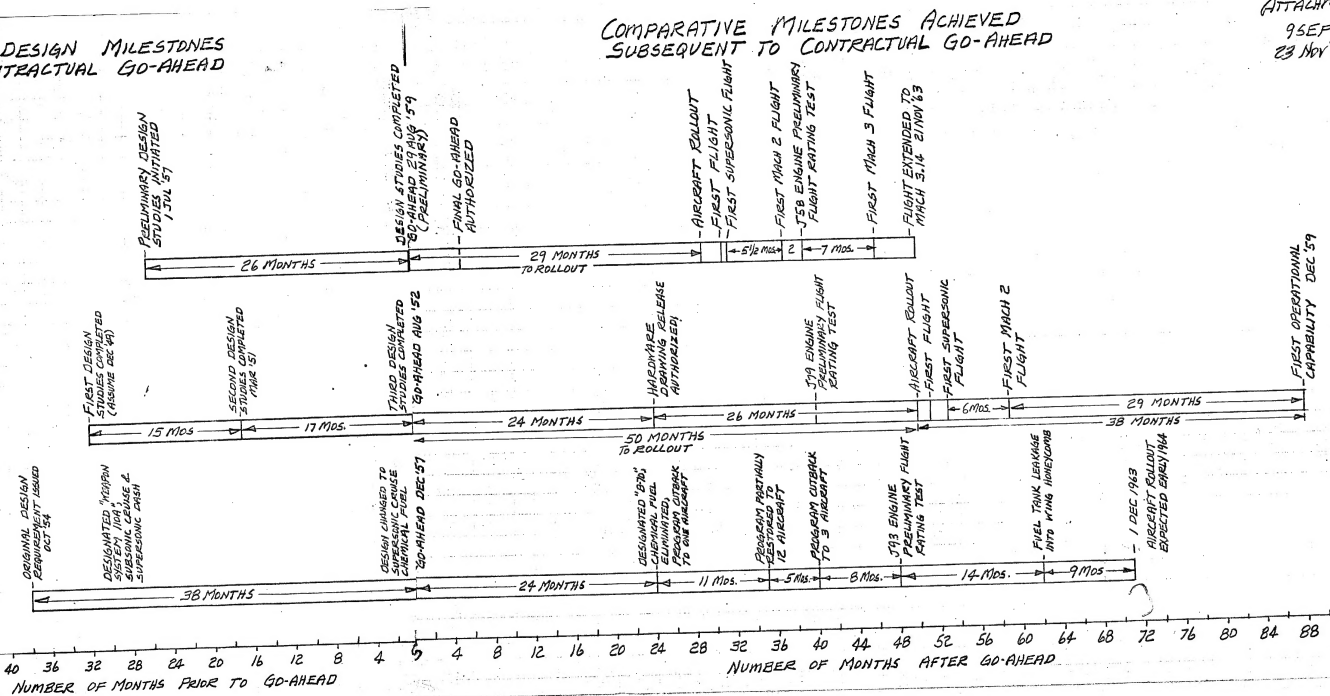
ATTACHMENT, 1
9 SEP '63
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A-12

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B-58

B-70



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ATTACHMENT 2

Tabulation - Chronological Milestones

<u>Milestone Description</u>	<u>Milestone Dates</u>		
	<u>A-12</u>	<u>B-58</u>	<u>B-70</u>
First B-58 design study competition won by Convair.		1949	
Second B-58 design study competition, designated "B-58".		Mar '51	
Third B-58 design study competition won by Convair, contract #MX-1964 awarded to produce the B-58, "go-ahead" authorized.		Aug '52	
B-58 design frozen - hardware drawing release authorized.		Aug '54	
B-70 original USAF design requirement issued.			Oct '54
B-70 designated "Weapon System 110A", subsonic cruise with supersonic dash capability.			1955
B-58 engines, General Electric J79 preliminary flight rating test completed.		Dec '55	
B-58 first aircraft rollout.		1 Oct '56	
B-58 first flight.		11 Nov '56	
B-58 first supersonic flight.		2 Jan '57	
Revised B-70 design study competition to incorporate supersonic cruise with chemical fuel - airframe contract awarded to North American, J93 engine contract awarded to General Electric, "go-ahead" authorized.			Dec '57

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<u>Milestone Description</u>	<u>Milestone Dates</u>		
	<u>A-12</u>	<u>B-58</u>	<u>B-70</u>
B-58 first Mach 2 flight.		1 Jul '57	
First U-2 follow-on preliminary design studies initiated.	1 Jul '57		
First U-2 follow-on preliminary design studies completed and contract DK-3559 awarded to Lockheed, preliminary A-12 go-ahead authorized.	29 Aug '59		
Contract awarded to Pratt & Whitney to develop JT11D-20 (J58) engine for A-12, go-ahead authorized.	Sep '59		
B-58 first operational capability.		Dec '59	
B-70 designation adopted, chemical fuel eliminated, program cut back to a single prototype.			3 Dec '59
A-12 final go-ahead authorized.	8 Feb '60		
B-70 program partially restored to 12 operational vehicles.			31 Oct '60
B-70 program cut back to two experimental and one prototype vehicles.			Mar '61
B-70 J93 engine preliminary flight rating test completed.			Jan '62
A - 12 first aircraft rollout.	26 Feb '62		
A - 12 first flight - J75 engines.	30 Apr '62		
A - 12 first supersonic flight.	9 May '62		
A - 12 first J58 engine flight.	5 Oct '62		
A - 12 first Mach 2 flight.	6 Nov '62		

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ATTACHMENT 2

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<u>Milestone Description</u>	<u>Milestone Dates</u>		
	<u>A-12</u>	<u>B-58</u>	<u>B-70</u>
A-12 J58 engine preliminary flight rating test completed.	4 Jan '63		
B-70 fuel tank sealant problem causing fuel leak into wing honeycomb structure. Rollout expected early 1964.			Mar '63 (Approx.)
A-12 first Mach 3 flight.	20 Jul '63		
A-12 flight extended to Mach 3.14	21 Nov '63		

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